



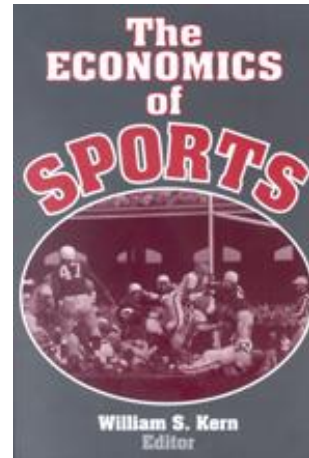
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# A Level Playing Field? Sports and Discrimination

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## 6

# A Level Playing Field? Sports and Discrimination

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Economists and the public at large have become increasingly interested in the issue of discrimination in sports. The public perceives that to some degree the sports business is an oasis of equal economic opportunity for minorities, who in this setting are judged and compensated solely on the basis of their performance. This impression is underscored by the high level of minority representation in our major team sports. As of the mid 1990s, Major League Baseball (MLB) was about 30 percent black, the National Football League (NFL) was 65 percent black, and black players made up 80 percent of the National Basketball Association's (NBA's) ranks (Staudohar 1996). Further, some of the highest paid athletes are black: some multiyear NBA contracts for black players top \$100 million; in baseball, a majority of the players who made at least \$8 million in 1998 were black, despite the 30 percent black representation in the MLB; and in the NFL, while most of the highest paid players in 1997 were quarterbacks (a disproportionately white position, as I will discuss later), there were many prominent, highly paid black players as well.

Despite this evidence of economic achievement, there is an ominous undercurrent in the treatment of black professional athletes. Until the 1940s, of course, black players were excluded from professional team sports. And while African Americans are well-represented as players in the 1990s, they are much less likely to be coaches, managers, or executives for sports teams. Anecdotal accounts of team sports identify many instances in which African-American players perceived quotas against them, even in basketball, which as noted, is overwhelmingly black (Bradley 1976; Halberstam 1981). In 1987, a baseball

team executive claimed that black athletes did not have the qualities necessary to become managers or executives, and in 1988 a well-known broadcaster was fired for making racist comments (Staudohar 1996). Several players in the 1998 NBA lockout viewed the league's hostility as racially based (Samuels 1998). And golf and tennis, after years of being almost completely white sports at the professional level, still have few black players on tour. In many instances, tournaments in these sports have been played at clubs that do not accept African Americans as members.

Public attention focuses on issues of race and sports in part because of the celebrity of the players involved. Moreover, the history of racial integration in sports, beginning with the hiring of Jackie Robinson by the Brooklyn Dodgers in 1947 and soon continuing in football and basketball leagues has been an especially dramatic story. The process of racial integration in sports assumed national importance because it took place against the background of African Americans' struggle in the 1950s and 1960s for civil rights.

In this talk, I survey evidence economists have gathered on the extent of discrimination in sports. As I will show, discrimination can take on several forms, each of which has been the subject of economic research. Although the anecdotal evidence mentioned earlier is suggestive of the mistreatment of black players, we need to know what the anecdotes add up to. Are they isolated incidents, or are they symptomatic of general patterns and trends in professional sports? These questions can only be answered by studies that use statistical evidence. In this vein, I will talk about economic research on discrimination in sports with respect to salaries, hiring, retention, positional segregation, and customer prejudice.

## **ECONOMIC ISSUES IN ANALYZING DISCRIMINATION IN SPORTS**

Before discussing evidence on discrimination in sports, it will be useful to make clear what I mean by "discrimination" and what economics has to say in general about the issue. Beginning with the seminal contribution of Gary Becker (1957), economists have usually

defined labor market discrimination as the unequal treatment of equally qualified workers. Becker (1957) identified three forms of discrimination: employer, co-worker, and customer. As we will see, each of these forms has occurred in the sports business.

In the Becker model under competition, assuming profit-maximization by at least one firm and constant returns to scale, we expect entry and exit to eliminate employer and co-worker discrimination. Discriminating employers will be driven out of business by the nondiscriminator(s). As analyzed in Chapter 4 of Becker (1957), if there is co-worker discrimination, then in equilibrium we expect equally competitive segregated firms with equal pay for equal work. However, customer discrimination is different in that an employer who pays more money to workers whom customers prefer to deal with is likely to be rewarded by the market relative to one who does not make such distinctions. While workers not preferred by customers may be able to find work in the noncustomer sector, in a general equilibrium context, there is no guarantee that their incomes will not be hurt by the existence of customer discrimination (Kahn 1991a). And if these nonpreferred workers have a comparative advantage in the customer sector, then they may still choose to stay there even if they face the effects of customer discrimination.

These features of the economics of customer discrimination suggest that competitive forces are less likely by themselves to eliminate this form of discrimination than discrimination based on employer or co-worker prejudice. The sports industry is perhaps the most prominent example of a customer-based service sector. Further, because sports leagues are monopolies, they may not face the kind of free entry that might serve to discipline discriminating employers. Thus, we expect that the economic forces tending to eliminate discrimination in sports are perhaps weaker than in other industries.

A common difficulty labor economists have faced in testing for the existence of labor market discrimination is suggested by the definition I just explained. Namely, while it may be easy in many cases to tell who is paid more money, discerning if there is unequal pay for equally qualified workers can be a major problem. This difficulty has affected discrimination research on the labor force at large because databases such as those from the census can only tell us how many years of school a person completed, his/her age and marital status, and some-

what crude measures of where he/she works. For example, based on the census, the “productivity” of a 25-year-old minor league hockey player who played two years of college hockey is indistinguishable from that of a 25-year-old NBA star such as Magic Johnson, who turned pro after his sophomore year, and who in 1984 had already been the NBA finals’ most valuable player (MVP) in 1980 and 1982. Is any pay gap between these two individuals evidence of unequal pay for equal work? In contrast to the census, in sports we have excellent controls for productivity, as indicated, for example, in *The Baseball Encyclopedia*. The sports industry provides us with an excellent opportunity to study discrimination because data on player race, compensation, and performance are so readily available.

## EVIDENCE ON DISCRIMINATION IN SPORTS

In the early days of baseball integration, there was considerable evidence to support Becker’s (1957) notions of employer, customer, and co-worker discrimination. First, employers discriminate if they treat the output of, for example, black workers, as less valuable than the identical output of white workers. If all employers have the same tastes for discrimination, then a common “discrimination coefficient” that describes this discount in dollar terms for the pay of black workers will result. A nondiscriminating employer can earn more money than a discriminator by hiring the most productive workers at the lowest cost possible, regardless of race, an opportunity that discriminators forgo. This prediction has been tested in the context of MLB’s integration. Specifically, some teams, particularly those in the National League in the late 1940s and 1950s, were more active in bringing black players onto their rosters than were teams in the American League (Gwartney and Haworth 1974; Hanssen 1998). Teams that were more willing to use black players had significantly more success on the playing field than those that were not, an outcome predicted by Becker’s (1957) model.

Second, there was some evidence of co-worker prejudice in the early days of baseball integration when the St. Louis Cardinals threatened to strike rather than play against a black player, Jackie Robinson.<sup>1</sup> Further, at least one Dodger player asked for a trade rather than play

alongside Robinson, illustrating the tendency toward segregation, as predicted by Becker (1957). Third, there were many instances of customer prejudice, including death threats against Robinson in his early years with the Dodgers.

The labor market manifestation of these forms of discrimination can include salary discrimination (unequal pay for equal work), hiring discrimination, retention discrimination, and positional segregation. A considerable volume of research has attempted to determine the extent of these outcomes.<sup>2</sup> Salary discrimination is probably the most studied issue, with a research design that can be described by the following equation:

$$\text{Eq. 1} \quad \ln S = \mathbf{B}'\mathbf{Z} + a\text{WHITE} + u,$$

where for individual players in a given sport,  $S$  is compensation,  $\mathbf{B}$  is a vector of regression coefficients,  $\mathbf{Z}$  is a vector of performance indicators, team characteristics, and market characteristics,  $\text{WHITE}$  is a dummy variable equaling 1 for white players, and  $u$  is an error term. This setup is similar to much work in labor economics that attempts to assess the extent of discrimination by estimating  $a$ , the coefficient on  $\text{WHITE}$ .<sup>3</sup> What differs about sports is both the accuracy of the compensation data (that may in many cases come directly from the relevant players' union, which keeps copies of the actual player contracts) and the very detailed set of performance indicators available on athletes.

A major difficulty in conducting labor market research on discrimination using models like Eq. 1 is that  $\text{WHITE}$  may be correlated with unmeasured productivity, controlling for the measured variables  $\mathbf{Z}$ ; if so, then its estimated coefficient will be biased. In sports, we have much better controls than in labor market data in general. For example, a widely used data source such as the Michigan Panel Study of Income Dynamics (PSID) allows one to control for years of schooling, type of degree, length of labor market experience, firm seniority, union coverage, and three-digit industry and occupation classification. In contrast, the *Baseball Encyclopedia* and other baseball data sources allow one to control for batting average, stolen bases, home runs, career length, team success, and a variety of other performance indicators. In addition, "occupation" in baseball is one's position, a far more detailed indicator than exists in the census classification, which is used

by the PSID. All players at the major or minor league level in all sports would get the same three-digit occupation (“athletes”) and industry (“entertainment and recreation services”) in the census classification. Because of far better controls for individual performance, occupation, and firm in sports, we presume that any correlation between WHITE and  $u$ , given  $\mathbf{Z}$ , is much less severe in sports than in more general labor market data bases.

Analyses of equations like Eq. 1 have produced the most evidence of salary discrimination in professional basketball. In the mid 1980s, controlling for various performance and market-related statistics, there were statistically significant black salary shortfalls of 11–25 percent, depending on sample and specification.<sup>4</sup> The apparent discrimination was especially noteworthy because, as Table 1 shows, for the 1985–1986 season, black players on average earned \$407,000, while whites earned \$397,000. However, Table 1 also shows that black players outdid whites in major performance categories such as playing time, scoring, and rebounding. In fact, using a regression like Eq. 1, which controlled for performance and market-related variables, Kahn and Sherer (1988) found the *ceteris paribus* WHITE effect to be 21–25 percent, and this was highly statistically significant. This combination of results shows how important it can be to control for productivity, which

**Table 1 Pay and Career Performance in the NBA**

Year	Black players	White players
1985–1986		
Salary (\$)	407,190	396,570
Minutes/game	25.45	20.86
Points/game	12.11	8.69
Rebounds/game	4.8	4.4
1994–1996		
Salary (\$)	1,622,972	1,384,010
Minutes/game	23.9	18.7
Points/game	10.5	7.8
Rebounds/game	4.4	3.5

SOURCE: Kahn and Sherer (1988); Hamilton (1997).

in this case was higher for black players, in assessing the extent of discrimination. While variables may have been omitted that could have explained the *ceteris paribus* white salary advantage, reverse regression tests (which can under some restricted circumstances take account of such problems [Goldberger 1984]), showed even larger apparent discrimination coefficients (Kahn and Sherer 1988).

By the mid 1990s, there was evidence of unexplained black salary shortfalls only among the elite players in the NBA. Table 1 shows that, overall, blacks in 1994–1995 now outearned whites by about \$240,000 and continued to outperform whites. Hamilton (1997) found for the 1994–1995 season that, all else equal, there were no overall significant racial salary differentials in the NBA. The point estimate in an ordinary least squares (OLS) regression like Eq. 1 was 0.010 for WHITE with a standard error of 0.093.<sup>5</sup> However, Table 2 shows that salary differentials were not uniform across the distribution. In particular, black players outearned whites through the 75th percentile, while among players near the top (the 90th percentile), whites were paid a slight \$16,000 more than blacks. White stars did better relative to black stars than whites did among the journeymen. To examine the question of unequal pay for equal performance across the distribution of playing talent, Hamilton (1997) used quantile regressions like the following:

$$\text{Eq. 2} \quad (Y_{90}|\mathbf{Z}) = B_{90}'\mathbf{Z} + a_{90} \times \text{WHITE},$$

where  $Y_{90}|\mathbf{Z}$  is the 90th percentile of conditional distribution of log salaries given  $\mathbf{Z}$  and  $B_{90}$  and  $a_{90}$  are quantile regression coefficients. In

**Table 2 Black and White NBA Salaries by Distribution Percentile, 1994–1995 (\$)**

Percentile	White players	Black players
10	150,000	270,000
25	250,000	752,000
50	1,036,500	1,417,500
75	2,135,000	2,333,500
90	3,260,000	3,243,800

SOURCE: Hamilton (1997).



particular,  $a_{90}$  tells us the WHITE log salary advantage for players at the 90th percentile of the conditional distribution of log salary.

Regressions such as Eq. 2 can be run for any distribution quantile, and the associated WHITE coefficients provide estimates of the unexplained salary premia for white players across the distribution. When Hamilton (1997) estimated models like Eq. 2, he found no significant racial salary differentials at the 10th, 25th, and 50th percentiles but positive and significant WHITE pay effects (at the 5.6 percent and 12 percent levels in two-tailed tests) at the 75th and 90th percentiles amounting to 0.18 to 0.19 log points.<sup>6</sup> These results suggest that while there was no significant unexplained black salary shortfall on average in the NBA in the 1994–1995 season, for star or near-star players (i.e., those at the 75th percentile and above in the conditional wage distribution), there may have been substantial discrimination in favor of whites. Again, the importance of controlling for performance is underscored because these white salary advantages are not apparent in Table 2, which, of course, does not control for performance.

In contrast to these findings of white pay advantage, *ceteris paribus*, in the NBA, similar OLS analyses of salaries in baseball and football have not found much evidence of racial salary discrimination against minorities. For example, in baseball, these analyses never find that being white has a positive effect. Among nonpitchers, in fact, significantly negative effects of being white were found in 1977 and 1987 (Christiano 1986 and 1988) and during the 1985–1991 period (Irani 1996). On the other hand, Kahn's (1993) analysis of 1987 data, using the same wage sample as Christiano (1988), found that these negative effects of being white disappeared when a longer list of productivity variables was added. In football in 1989, Kahn (1992) found *ceteris paribus* salary premia discrimination coefficients in favor of whites of only 1–4 percent, and these were usually not statistically significant. Kahn (1992) did find, however, that in the NFL, nonwhite players did better in areas with a larger relative nonwhite population than with a small relative nonwhite population; and whites did better in more white metropolitan areas. These findings suggest the influence of customers, but they did not add up to large overall racial salary differences in the NFL.

It is perhaps noteworthy that the one sport with the most evidence of racial salary discrimination, basketball, was the sport with the larg-

est black representation as of the mid 1990s at 80 percent, in contrast to baseball's 30 percent and football's 65 percent.<sup>7</sup> These differences in racial representation suggest that customer preferences may have something to do with the racial pay gap we observed in basketball. And there is indeed evidence from the 1980s consistent with the existence of such preferences. For example, Kahn and Sherer (1988) found that, all else equal, during the 1980–1986 period each white player generated 5,700 to 13,000 additional fans per year. The dollar value of this extra attendance more than made up for the white salary premium.<sup>8</sup> And other researchers found a close match between the racial makeup of NBA teams in the 1980s and the areas where they were located, again suggesting the importance of customer preferences (Brown, Spiro, and Keenan 1991; Burdekin and Idson 1991; Hoang and Rascher 1999).

However, by the 1990s, customer preferences for white players were less evident. Dey (1997), for example, found that, all else equal, white players added a statistically insignificant and economically relatively unimportant 60 fans apiece per season during the 1987–1993 period. This evidence is consistent with the decline in the NBA's overall, unexplained white salary premium from the 1980s to the 1990s, although Hamilton's (1997) finding for whites near the top of the distribution still suggests fan preferences for big name white players. It is possible that white stars add fans even if the average white player does not.

Customer discrimination has also been found for baseball. For example, Hanssen (1998) found that white players added baseball fans, all else equal, for the 1954–1972 period, and Irani (1996) obtained a similar finding in baseball for 1972–1991. Moreover, Nardinelli and Simon (1990) found that, controlling for performance, in 1989, baseball cards for white players sold at a significantly higher price than those of black players, providing further evidence of fan prejudice. The lack of a white salary premium in baseball in the face of these customer preferences remains a puzzle. Perhaps the positional segregation and apparent retention discrimination in baseball (see the following paragraphs) are the ways in which such preferences affect the baseball labor market.

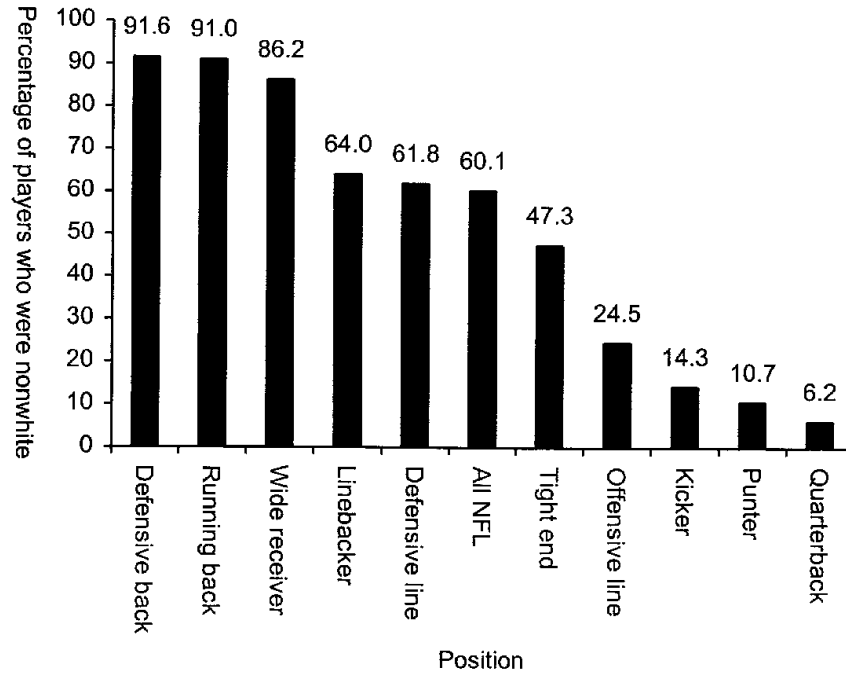
Other possible types of racial discrimination in sports involve hiring, retention, and assignment discrimination. These take the form of

unequal probabilities of being drafted or retained, as well as positional segregation. First, regarding the draft, Kahn and Sherer (1988) found that there were small, insignificant racial differences actually favoring black players in draft order among NBA players on rosters in 1985, conditional on college performance. This suggested the absence of hiring discrimination in the NBA, but we had no information on those not drafted or not on rosters. In the NFL, Conlin and Emerson (1998) found indirect evidence that black players were drafted later than whites of equal playing ability during the 1986–1991 period. Again, without information on those not drafted or not making the roster, we have incomplete evidence on hiring discrimination. But Conlin and Emerson's (1998) results suggest barriers to black players in the NFL.

Second, regarding retention, Jiobu (1988) found that from 1971 to 1985 in Major League Baseball, black players had a significantly higher exit rate than whites, controlling for performance, position, and age at entry. Because baseball is likely to be virtually all major league players' best career opportunity, a reasonable interpretation of these exit hazard differences is that they reflect team decisions not to offer players a new contract. And Hoang and Rascher (1999) found a similar result for the NBA: Other things equal, during the 1980–1991 period, white players had about two additional years of career length (36 percent) than black players, again suggesting retention discrimination. Whether this disparity will hold up in the 1990s or whether, like the overall effects of race on attendance and NBA salaries, it will dwindle, is an interesting question for future researchers.

Third, positional segregation by race has been noted in baseball and football. Christiano (1988), for example, found that black baseball players in 1987 were overrepresented in the outfield and underrepresented at infield and catcher. Kahn (1992) found that in the NFL in 1989, nonwhite players were overrepresented at running back, wide receiver, and defensive back and underrepresented at quarterback, kicker, punter and offensive line (see Figure 1). Whether this segregation represents current discrimination, past discrimination by high school or college coaches, or self-selection is an open question, and there is lively but inconclusive debate about these issues (Kahn 1991b). Regardless of the cause of segregation, it appears to have some modest consequences toward a slight salary gap favoring white football players. Table 3 shows that the overall white salary advantage of 4 percent

**Figure 1 Percent Nonwhite by Position, NFL 1989**



SOURCE: Data from Kahn (1992).

**Table 3 White/Nonwhite Salary Ratio by Position, NFL 1989**

Position	Players who were nonwhite (%)	White/nonwhite salary ratio
Punter	10.7	1.13
Offensive line	24.5	1.07
Defensive line	61.8	1.04
Tight end	47.3	0.99
Placekicker	14.3	0.96
Defensive back	91.6	0.94
Linebacker	64.0	0.91
Running back	91.0	0.69
Wide receiver	86.2	0.66
Quarterback	6.2	0.51
Total	60.1	1.04

SOURCE: Data from Kahn (1992).

is greater than it is for most of the NFL positions (the three positions where whites outearn blacks account for only 33 percent of the league). In fact, if nonwhites had the white representation at each position but kept their own position-specific salary levels, then they would outearn whites by an average of about \$88,000. With their actual positional representation, nonwhites earned \$13,000 less than whites. In baseball, segregation has future consequences to the extent that managers are drawn from the middle infield positions, which have been disproportionately white (Scully 1989).<sup>9</sup>

## CONCLUSIONS

On the surface, it looks as though professional sports have come a long way since the 1940s when black players were banned from participating. As of the 1990s, African Americans are much more than propo-

portionately represented at the major league level and earn on average millions of dollars in baseball and basketball. Further, pure salary discrimination, which may have been extensive in the 1980s in the NBA, appears to have declined by the 1990s and may currently be limited to white stars; and there is no evidence of salary discrimination in baseball and little in football. On the basis of these facts, one is tempted to conclude that discrimination in sports is a nonproblem.

Yet there is evidence that fans have or have had racial preferences in basketball, football, and baseball. Do these preferences have any consequences, as predicted by the economic theory of discrimination? The answer is that while overt salary discrimination is not a major outcome of these preferences (other than for the NBA in the 1980s or white NBA stars in the 1990s), there is some evidence that reflects hiring discrimination, positional segregation, and retention discrimination. With customer preferences continuing in many instances for white players and with evidence for these alternative forms of discrimination, professional sports and society at large have some distance to travel before they can say they have truly eliminated discrimination.

## Notes

1. This discussion of race and baseball is based on Okrent and Wulf (1989) and Tygiel (1983).
2. For a survey of this evidence through the 1980s, see Kahn (1991b).
3. In some instances, researchers have used separate regressions for white and non-white players, reflecting or testing the possibility that performance is rewarded differently by race.
4. See for example, Kahn and Sherer (1988), Koch and Vander Hill (1988), Wallace (1988), and Brown, Spiro, and Keenan (1991).
5. Other analyses of basketball salaries in the 1990s also failed to find *ceteris paribus* racial salary differentials. See Dey (1997) and Bodvarsson and Brastow (1998).
6. The WHITE results for the lower percentiles were  $-0.184$  (asymptotic standard error 0.291) for the 10th percentile,  $-0.209$  (0.183) for the 25th percentile, and  $-0.005$  (0.152) for the 50th percentile.
7. These figures were very similar in the 1980s as well. See Staudohar (1996).
8. Hoang and Rascher (1999) also examined NBA attendance during the 1980–1991 period and found that, other things equal, larger values of (percent white on the team/percent white in the city) were significantly positively associated with attendance. This finding is consistent with the idea of customer preferences for white players.

9. A lively literature has developed on the issue of discrimination against French Canadians in the National Hockey League. Some authors have found apparent discrimination against this group in Canadian cities outside Quebec province, a pattern consistent with the notion of customer discrimination (Jones and Walsh 1988; Longley 1995). Yet others have disputed this interpretation and the findings as well (Krashinsky and Krashinsky 1997). There is also a debate over whether French Canadians face entry barriers into the NHL, with some authors alleging that French Canadians need to have a higher performance level to be drafted as early as English Canadians (Walsh 1992; Lavoie, Grenier, and Coulombe 1992).

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